

# Comparisons of Job Characteristics

**Focus Occupation:** [Environmental Engineers \(17-2081\)](#)

**Associated Occupation:** [Environmental Engineering Technicians \(17-3025\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 91

**Focus Occupation:** Environmental Engineers (17-2081)

**Associated Occupation:** Environmental Engineering Technicians (17-3025)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Engineering and Technology	5.7	15.8	21.7	>>	Current knowledge level is likely more than sufficient
Design	5.2	11.1	17.2	>>	Current knowledge level is likely more than sufficient
Building and Construction	4.0	10.6	13.0	>	Current knowledge level is likely sufficient
Physics	4.3	10.2	15.7	>>	Current knowledge level is likely more than sufficient
Law and Government	5.9	9.5	13.6	>>	Current knowledge level is likely more than sufficient
Biology	3.7	6.8	10.0	>>	Current knowledge level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 85

**Focus Occupation:** Environmental Engineers (17-2081)

**Associated Occupation:** Environmental Engineering Technicians (17-3025)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Reading Comprehension	10.7	16.3	16.4	0	Current skill level may be sufficient
Critical Thinking	10.8	14.5	14.5	0	Current skill level may be sufficient
Active Learning	8.7	12.6	11.5	0	Current skill level may be sufficient
Mathematics	6.2	11.3	12.3	0	Current skill level may be sufficient
Quality Control Analysis	5.9	9.7	10.4	0	Current skill level may be sufficient
Management of Material Resources	3.7	6.8	5.6	<	A higher skill level may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 89			
Focus Occupation: Environmental Engineers (17-2081)					
Associated Occupation: Environmental Engineering Technicians (17-3025)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Written Comprehension	11.0	16.6	16.0	0	Current ability level may be sufficient
Problem Sensitivity	11.1	15.9	17.0	0	Current ability level may be sufficient
Near Vision	11.1	14.7	13.0	<	Some improvement in abilities may be required
Deductive Reasoning	10.6	14.5	16.2	>	Current ability level is likely sufficient
Inductive Reasoning	10.2	13.6	15.4	>	Current ability level is likely sufficient
Information Ordering	9.9	13.3	14.2	0	Current ability level may be sufficient
Category Flexibility	9.0	11.8	13.6	>	Current ability level is likely sufficient
Mathematical Reasoning	6.3	10.6	13.4	>	Current ability level is likely sufficient
Number Facility	6.3	10.6	11.7	>	Current ability level is likely sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 88
Focus Occupation: Environmental Engineers (17-2081) Associated Occupation: Environmental Engineering Technicians (17-3025)		
Work Activities	Exclusivity of Activity	
Analyze scientific research data or investigative findings	27	
Analyze technical data, designs, or preliminary specifications	47	
Calculate engineering specifications	64	
Communicate technical information	4	
Create mathematical or statistical diagrams or charts	43	
Develop plans for programs or projects	31	
Estimate cost for engineering projects	69	
Evaluate engineering data	60	
Examine engineering documents for completeness or accuracy	62	
Explain complex mathematical information	30	
Follow safe waste disposal procedures	50	
Prepare technical reports or related documentation	22	
Read technical drawings	7	
Test equipment as part of engineering projects or processes	67	
Understand engineering data or reports	48	

Use building or land use regulations	65
Use government regulations	44
Use hazardous disposal techniques	80
Use hazardous materials information	35
Use pollution control techniques	62
Use scientific research methodology	21
Use technical regulations for engineering problems	61

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 88

**Focus Occupation: Environmental Engineers (17-2081)**

**Associated Occupation: Environmental Engineering Technicians (17-3025)**

Tools and Technologies	Exclusivity
Audio and visual equipment	4
Autoclave and sterilizer equipment and accessories	12
Business function specific software	1
Chemical evaluation instruments and supplies	10
Chromatographic measuring instruments and accessories	16
Computer data input devices	2
Computer printers	2
Computers	1
Content authoring and editing software	1
Data management and query software	1
Development software	4
Electrical measuring and testing equipment	7
Electrochemical measuring instruments and accessories	9
Filters	30
Fluid mechanics equipment	11
Gas analyzers and monitors	10
Hydrological instruments	31
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Laboratory centrifuges and accessories	13
Laboratory decanting and distilling and evaporating and extracting equipment and supplies	19
Laboratory electrophoresis and blotting system and supplies	26
Laboratory enclosures and accessories	17
Laboratory environmental conditioning equipment	24
Laboratory freeze dryers and lyophilizers and accessories	40
Laboratory furnaces and accessories	26
Laboratory incubating equipment	20
Laboratory mixing and stirring and shaking equipment and supplies	19

Laboratory ovens and accessories	15
Laboratory water purification equipment and supplies	29
Light and wave generating and measuring equipment	4
Liquid and gas flow measuring and observing instruments	15
Liquid and solid and elemental analyzers	19
Network applications software	1
Pumps	9
Sampling equipment	12
Soil measuring equipment	20
Spectroscopic equipment	10
Temperature and heat measuring instruments	6
Viewing and observing instruments and accessories	4
Weight measuring instruments	7

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.